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# SECOND ANNUAL REPORT

OF THE

## WILLIAMS SECULAR SCHOOL.

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Man is approaching a more complete fulfilment of that great and sacred mission which he has to perform in this world. His reason being created after the image of God, he has to use it to discover the laws by which the Almighty governs his Creation; and by making these laws his standard of action, to conquer Nature to his use—himself a Divine instrument. Science discovers these laws of power, motion, and transformation; industry applies them to the raw matter which the earth yields us in abundance, but which becomes valuable only by knowledge; art teaches us the immutable laws of beauty and symmetry, and gives to our productions forms in accordance with them.

*Speech of Prince Albert at the Mansion House.—March 21, 1850.*

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# SECOND ANNUAL REPORT

OF

## THE WILLIAMS SECULAR SCHOOL

FOR THE YEAR 1851.

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IN the First Annual Report, a general statement was made of the circumstances which led to the foundation of the School, of the subjects taught and the mode of teaching them, and the principles upon which the School is conducted. It is necessary here to recapitulate only that the School owes its institution to Mr William Ellis, of Champion Hill, Camberwell, and that it is designed for the instruction of the Children of the Working-Classes. The subjects taught include English Reading, Grammar, and Composition; Writing, Arithmetic, Geography, History, Book-Keeping, Drawing, and Vocal Music; Plain and Ornamental Needlework for the girls; also the Elements of Mathematics, Natural History, Chemistry, Natural Philosophy, Social Economy, Physiology, and Phrenology.

In the organization of the School, the teacher has endeavoured, as far as possible, to combine the advantages of the monitorial and simultaneous systems, without carrying either of them so far as is customary with their exclusive partizans.

The object of the school is to train children to virtue and usefulness, by instructing them in the constitution of the things and beings which exist, their relations, and the consequences of their various modes of action; and by accustoming the animal propensities, and moral and religious sentiments, to act in harmony with the intellectual faculties, in obeying throughout life the law of God inscribed in the records of Creation. In order to avoid the difficulties arising from differences of opinion among the various sects on points of Religious Doctrine, the department of dogmatic Spiritual Instruction is not undertaken, the teaching being confined to matters that are purely secular, or relating to this world and its duties only.

The number of children in attendance in 1849 amounted to 160;

but as the fees were then taken weekly, it was found that when the pence were wanting, or needed for other purposes, the child was withdrawn from school, and returned when its parents were more prosperous. This irregularity interfered seriously with the general arrangements of the school, and with the progress of the other children. Thus, every Monday morning, there was a continual return of temporary deserters, and also an influx of new comers—each individual requiring separate examination and classification. The entrance of these children into classes already advanced in particular courses of instruction, was attended with little profit to themselves, while it seriously interfered with the lessons of those already in the class.

To obviate this evil, the weekly fees were discontinued, and only quarterly and half-quarterly fees taken; the result of which was a considerable falling-off of numbers, those only remaining whose parents were of steady habits, and in comparatively easy circumstances, and who desired that their children should give regular attendance. At present the scholars amount to 130, about 80 of whom are boys and 50 girls. The proportion of younger children is now greater than formerly, and there is good reason to hope that the majority of them will remain at the school long enough to be carried through a complete course of instruction, and thus put the merits of the system here adopted, fairly to the test of experience.

The progress of these younger children is the most decided and satisfactory. The awakened energies of their intellect are strikingly exhibited in their ever active and intelligent curiosity, and the deep interest they take in their lessons. Little children of 7 or 8 years of age, who have been at the school a year or two, exhibit a greater amount of general intelligence and reasoning power than the majority of new comers at 11 or 12 years of age. It is not meant that they are more advanced than these in reading and writing, but that they possess a greater amount of miscellaneous useful knowledge,—that they observe objects more accurately,—and that when a new subject is presented to them, they are able to comprehend it more readily, and perceive more clearly its general relations, and its applications to other subjects.

In the course of some very recent lessons to the younger children, the teacher has been surprised at the clear recollection which those who have been longest at the school have retained of lessons given nearly two years previously, when of course they were very young indeed. In the midst of a lesson they will sometimes exclaim, “Oh, you told us that in Infirmary Street,” (the locality of the school in 1848-9), and they will repeat a number of the details of the former lesson, and frequently give, in their own way, a satisfactory account of a whole subject, as far as it has been expounded to them.

Visitors who have attended the lessons of this division, commonly express their surprise at the degree of acquaintance these children—



varying from 5 to 8 years of age—exhibit with the outlines of such subjects as Physiology, and others of a scientific character, which are usually considered very difficult, and beyond the powers of comprehension of children. There is nothing that the experience of this school has brought more clearly to light than the erroneousness of this idea. Instead of being the most difficult, the teacher has found that the elementary facts and truths of Natural History, Physics, Chemistry, and Physiology, are—of all the subjects taught in the school—the most easily and eagerly apprehended by the children, and the most permanently retained; and that the most difficult subject of all is English spelling.

It will, of course, be understood that these remarks do not apply to the more profound and intricate investigations of the mathematical sciences, or the delicate minutiae of experimental philosophy, but only to the great facts and broad principles of the phenomena and laws of Nature, which are all that it is attempted to teach at the school.

This readiness of apprehension was expected, from the obvious consideration that the same Divine wisdom which instituted the mental faculties, also constituted the material world, and that an adaptation of the one to the other was therefore presumable. All natural objects present themselves first to the senses and perceptive faculties as mere existing things, possessing certain qualities; they are next viewed as active agents, and the phenomena which they exhibit are presented to Eventuality, and the other faculties whose organs form the second range of the perceptive group. These actions, when regarded in their relations and results, are the objects of the reflective faculties. The practical utility of the arrangements of Nature bearing directly on our comforts and interests, arouses to harmonious and beneficial activity the social and self-preservative feelings; while the wisdom, benevolence, and beauty which beam from every work of God, appeal powerfully to the moral, religious, and poetic sentiments. Thus, the objects of science, when presented in their natural order to the mind, take hold of all its faculties, and cling to it with a force and permanency proportionate to the number and vigour of the faculties addressed.

Phrenological investigations have shewn that attention and memory are not separate independent faculties, but are modes of action common to each of the intellectual powers, and bear a relation to their general vigour. Hence, the interest felt in any particular subject, and the power of retaining knowledge of it, depend upon the number of combined faculties to which it appeals, as well as upon the strength of the faculties considered individually.

This principle is the key to our power of imparting knowledge. The greater the number of faculties the teacher is capable of rousing into energetic activity, and bringing to bear upon the subject, the more keen will be the attention of the children, and the more per-

manent the impression made upon them. If the teacher be an intelligent phrenologist, well acquainted with the functions of the elementary faculties, and the objects to which they are related, he knows at once which mental powers he is appealing to, and it is easy, and soon becomes habitual to him, to present scientific subjects to all the faculties in the order in which they naturally and most harmoniously act. He thus not only imparts a greater amount of knowledge, but affords to the mind the best possible discipline ; for it must be remembered, that while the most powerful character is that in which the faculties act with the greatest energy, the most perfect is that in which their action is combined in the truest harmony.

In the case of children who, for a long time, have been accustomed to learn lessons by rote, it is at first difficult to direct their attention continuously and systematically to precise objects. This seems to arise from the fact, that in learning lessons by rote, two or three of the perceptive faculties, with Concentrativeness, are all that are exercised, and only these are trained to act in concert, while the others are left in a state of comparative torpor. Some time is required to bring the brain into that state of general uniform activity, which is essential to the operation of the mental faculties in logical succession and harmonious combination. Upon the existence of this condition seems mainly to depend the possession of the philosophical intellect ; and when once it is fairly induced, philosophical subjects, instead of appearing dry, heavy, and obscure, are found to be the most interesting and exciting that can be presented to the mind ; the whole character is awakened and vivified, and the change is decidedly visible in the countenances and general bearing of the children. This change is a matter of continual remark by the more frequent visitors to the school, who have observed that the coarseness and vulgarity of aspect of some of the children, and the heaviness and dulness of others, are rapidly changing to an expression of comparative refinement and intelligence ; and this has led many strangers to suppose that they belong to a higher class in society than is really the case.

The teacher has remarked that the greatest visible change takes place in children with large brains and lymphatic temperaments. Most of these are at first very docile and very stupid. They then become more active, but the activity is fitful ; they are restless and very troublesome ; this activity gradually becomes more regular, and they begin at length to take an intelligent interest in the business of the school, and co-operate with the teachers in their efforts to improve them ; and finally they are able to act efficiently as monitors, and then their general improvement is remarkably exhibited.

For some time after the commencement of the school, the teacher experienced the greatest difficulty in finding monitors who were able to conduct a class, even of the simplest kind ; and although a great deal of labour was bestowed to fit them for their duties, they remained



for a long time very inefficient, and they were also very unwilling to remain in the school for the extra lesson which is given to the monitors during the play hour. Now, however, there is no difficulty in selecting a full staff of efficient monitors; and if two or three times the number were required than is actually the case, there is a sufficient amount of active intelligence and dutiful integrity (which is quite as essential in a monitor as intelligence) to supply them.

The ability displayed by the monitors, and the improvement they have made, is gratifying to all connected with the school. In the arithmetic classes extensive subdivision is necessary, in order that the whole of each class may be occupied upon the same work, and in them the services of the monitors are more particularly required. They have frequently given valuable suggestions to the teacher upon the practical details of managing the classes. A portion of the instruction in reading is also given by them. After the class has read a page or two, their books are closed, and they are questioned upon what they have been reading. At first the monitors failed altogether in forming questions upon the subject-matter contained in the book, or they simply read the sentences in an interrogative form, so that the answer required was simply Yes or No. Now, however, they not only put questions in their own words, and so framed as to test fairly the intelligence and exercise the intellect of their class; but they usually give a fair amount of additional information on the subject of the lesson, derived either from the lessons they have received from the teacher, from their own reading, or from their own observations. They supply a number of original illustrations, and spontaneously avail themselves of the diagrams and apparatus belonging to the school to illustrate their subject. Thus, a moveable orrery, constructed by Professor Cowper, and presented to the school by Mr Ellis, had made its way through half the monitors' classes before the teacher could find an opportunity of making it the subject of a lesson to the upper division. The same was the case with a collection of objects in bottles, kindly collected and presented by Mrs Ellis, and some diagrams prepared and presented by the Misses Ellis. The skeleton is continually dragged from his box, and suspended for close inspection in the midst of a class of eight or nine little children, who have altogether forgotten the terrors which such an object at first inspired, and now look upon its beautiful mechanism with intelligent admiration, and venerate it as the work of their Creator, and a demonstration of His wisdom and beneficence. The other anatomical preparations and diagrams, and all except the more fragile chemical apparatus, have been thus used by the monitors with much intelligence and efficiency.

Two boys, James Lambert and William Mason, have been articulated as pupil teachers; the progress they have already made, and the steady earnestness with which they continue to devote themselves to

their duties, justify the promoters in anticipating that they will reflect honour upon the school, and take a high and useful position in the profession they have chosen.

In the Appendix will be found reports of the examinations which took place during the past year. It must be noted that these examinations are not previously rehearsed, as is commonly the practice; no special preparations for them have taken place beyond a general recapitulation of the subjects of study during the week in which the examinations take place. The children are not made aware of the questions that will be put to them, or of the portion of any of the subjects that will be entered upon at the examination. The examiners themselves are only prepared as to the general order of subjects, the particular questions being for the most part suggested at the moment by the children's answers or other circumstances. The examination on Natural Philosophy, for example, was founded on an experiment shewn to the children at the examination, and which they had never seen before; they were called upon to explain the phenomena exhibited, their answers suggested other questions, and in this manner the direction which the examination took was determined. Only a small portion of each subject can be gone over in a single examination.

On examining the list of the subjects taught, it will be obvious that the majority of them cannot be fully elucidated in all their details. This being the case, the main object kept in view in the teaching is to fix in the minds of the children the great principles of each branch of science, and to give them such a key to the whole subject, and the mode of investigating it, as will enable them to prosecute more fully any branch of study that their future occupation or inclination may lead them to undertake. Every effort is made to train their minds to habits of philosophical investigation, and to carry them practically out of the very common error, that science is a something confined within the walls of universities, behind lecture tables, and amongst stoppered bottles and philosophical apparatus; and to convince them that what we call science is simply a systematic knowledge of the objects which exist, and the agencies which are ever acting around and upon us, and which in fact influence us at every moment of our lives, and regulate the most ordinary affairs of every-day life. They are taught to observe the fact, that the laws which science teaches are everywhere and always in operation; that no being or object can exist for a moment without being subject to them; that our happiness or misery depends to a great degree upon the circumstance, whether we place ourselves in harmony or at discord with them; that every object or action we can contemplate affords us an illustration of some of the principles of science; that all nature is a manifestation, and, by its relation to our faculties, a revelation of the power and will of our Creator; and that therefore every duty of life, great or small, has in itself an inherent dignity and importance,—is in fact a religious duty, and should be performed,



not merely for the sake of its direct advantages, but out of reverence to Him who instituted it.

Great care is taken, especially with the younger children, to avoid overtasking the brain. The teacher has found it necessary to make the lessons on mental arithmetic of shorter duration than any of the others, as children of highly nervous temperaments have complained of headache after such lessons, when protracted to the same length as the other lessons. Any undue activity of the brain is at once manifested by a characteristic brightness and restless expression of the eye, generally accompanied with a flush of the cheeks, and a redness and burning of the ears; sometimes there is a red band across the bridge of the nose, or the chin is more flushed than the rest of the face; in all cases the forehead is unusually hot, and frequently headache is complained of. The experience of the teacher has enabled him to detect these symptoms immediately when they present themselves, and to remove the exciting cause.

It is interesting to observe, that while the general mental activity of the children has so greatly increased since the commencement of the school, instances of this kind of morbid activity have become far less frequent, and of late have been almost unknown. A few cases have occurred of highly nervous and excitable children, who for some time after entering the school exhibited continually some of the above named symptoms: but this tendency has gradually subsided, and their general health and robustness have improved, while their intellectual progress has continued very satisfactory; facts which show strikingly that the system of instruction adopted in the school is safe and healthy, and the tendency to excessive cerebral activity is less than in schools in which tasks to be learned by rote constitute the chief exercises, and in which strong stimulants to love of approbation and fear are applied as means of eliciting exertion. This is easily explained when we consider that the blood, which flows to the head under all circumstances of mental activity, becomes diffused over the whole brain when the action is general, and thus moderate and uniform excitement results; whereas, when only a few organs are active, as in learning lessons by rote, or in mental arithmetic, there must be a tendency to a concentration of the blood upon these parts, and the danger of morbid action is proportionally increased. Thorough ventilation is also carefully attended to, and has a very beneficial effect in warding off drowsiness on the one hand, and undue excitement, from excessive interest in the studies, on the other.

The importance of introducing illustrations and ample explanations into all the lessons, is even greater in the case of Scotch than of English children, on account of the spoken language of the former differing so widely from the language of printed books. A great many common words, such as "moral" and "immoral," "mortal" and "immortal," and others, derived from Greek or Latin roots, are

quite intelligible to English children, from their hearing them used in common discourse ; while to Scotch children they appear like words in a foreign language, which are never heard at home. If illustrations and explanations are omitted, the latter may be made to repeat a lesson or a long series of answers in the words of a book, and know absolutely nothing about what they are repeating. In this school, pains are taken to teach them the signification of English words, by making them give their own definitions of them, by supplying examples,—shewing the thing itself in the case of physical properties,—and testing their comprehension by causing them to form sentences including the word under consideration. The method of learning definitions from a spelling-book or dictionary is of little practical utility in teaching Scotch children ; for the great majority of the definitions themselves require to be defined, on account of the very limited English vocabulary of the pupils.

In the First Annual Report, it was stated that “ it has been found necessary to have occasional resort to corporal punishment in extreme cases of disobedience ; but it is hoped that there will shortly be established a general moral tone among the children, sufficiently strong to obviate entirely the necessity of this most objectionable means of discipline.”

Corporal punishment is now entirely excluded from the school discipline, and the teacher pledges himself never again to have recourse to it. The Promoters were averse to it from the commencement, and the circumstances which led to its adoption at first were the following :—Previously to the opening of this seminary, Mr Williams had never had a school under his own management, but had been trained at the Birkbeck School of the London Mechanics’ Institution. Like many persons who have considered this subject theoretically, he objected to physical punishment ; but on discussing it with practical schoolmasters, he found them most unanimous and earnest in rejecting such views as Utopian, and in insisting upon the impossibility of efficiently conducting a large school without using direct physical chastisement, or some painful substitute for it equally objectionable. They told him that if he attempted to conduct a school of the kind proposed, failure would be inevitable if he were not allowed to use corporal punishment. As many of the individuals whom he consulted were men for whose judgment he had the highest respect, he was unwilling to oppose a merely speculative opinion of his own to their practical experience, and he therefore declined to undertake the charge of the school unless allowed to use physical chastisement, if found necessary. The Promoters yielded to him on this point, on the understanding that the infliction was to be dispensed with, if possible.

At first, considerable difficulties did arise in controlling the chil-



dren, because, from never having been accustomed to entertain even the idea of self-control, they regarded freedom from stripes as an invitation to anarchy. On several occasions, therefore, corporal punishment *was* resorted to, and the immediate result was better order in the school. Every time, however, that order and obedience were thus enforced, the teacher perceived and felt, with unequivocal distinctness, that the outward semblance of improvement was obtained at the cost of a moral sacrifice, both on the part of the children and himself. The enthronement of physical force produced a slavish submission in the children, and a degrading influence on the teacher. The hush and show of diligence which the punishment occasioned, could be maintained only by repeating the infliction; and in proportion as it became familiar, its restraining power diminished, while its demoralizing influence daily acquired strength. This experience led to a suspension of chastisements from about the month of February to the termination of the session at the end of July 1850. The school re-opened in the end of August, and in September there was an influx of new pupils, most of whom had been accustomed to yield obedience only to blows. Considerable disorder consequently ensued, and on one occasion it had reached to such a height that four of the boys were sentenced to receive two "palmies" each (*Anglice*, stripes on the hand). Among these was one boy who had been a considerable time at the school, but who had proved almost unmanageable, owing chiefly to his very remarkable deficiency of Cautiousness. He was intelligent, and endowed with about a medium development of the moral sentiments, and much Adhesiveness. He was strongly attached to the school and to the teacher, but he disturbed all discipline by playing grotesque antics, making queer noises, and giving absurd, though sometimes witty, answers to the questions put to the other children. All this was attributable mainly to an utter disregard of the consequences of his own actions, either to himself or others. On the occasion referred to he was one of the principal offenders. When it came to his turn to receive the "palmies," he, to the surprise of the teacher, began to cry most bitterly, imploring, with the greatest earnestness, that he might not be punished. "No, no, maister; dinna, dinna lick me, maister; no, no, no, maister, I'm no sae bad as that." He repeated the expressions again and again, in tones of positive anguish, to the great perplexity of the teacher, for it was quite clear that the fear of physical pain was not the cause of his distress. He had seen that the punishment inflicted on the other boys was slight, and his own careless indifference to pain is most remarkable; so much so, that he often comes to school bruised and bleeding in consequence of his utter recklessness in play, and he seemed to regard the floggings he received at home as a sort of customary excitement. It was clear that the pain he manifested on this occasion was purely moral; that the tie which bound

him to his teacher—who was perhaps the only person who had ever attempted to govern him by a really moral influence—was in danger of being broken, and that, in his own estimation, he was exposed by the punishment to a miserable degradation.

The teacher felt that the degradation was by no means limited to the boy, but that the larger share of it was his own; and, although compelled to inflict the punishment in this instance (the boy having been sentenced with the rest who had already suffered the infliction), he determined never again to have recourse to this most painful remedy for insubordination.

This resolution was confirmed by the general tone which pervaded the school for a day or two after the event; for although the punishment was not inflicted in presence of the rest of the pupils, they knew that it was going on; and when the teacher returned among them they were certainly much more quiet and orderly, but it was a gloomy and sullen quietness—the superior minds seemed instinctively oppressed with a feeling that they were to be governed by a degrading influence, while the inferior sulkily obeyed, merely because they were afraid to do otherwise. The evident tendency of the infliction was to make the latter regard disobedience as a sort of forbidden enjoyment, to be snatched when favourable opportunities occurred.

The teacher has very carefully observed and reflected upon the results of the two experiments of governing the school with and without corporal punishments, and is convinced that those which are usually held forth as the advantages of corporal chastisement are in fact dangerous and delusive evils. Its direct influence on the pupils is usually demoralising; and on the teacher, and, through him, on the school, invariably so.

The very facility which it affords of suppressing at once inattention, disorder, and a tendency to disobedience, is particularly mischievous; for it blinds the teacher to the real cause of the evil, which is most commonly some defect in the detailed or general management of the school, or some want of energy or skill on his own part.

If he is not permitted thus to repress the outward symptoms of these deficiencies by “making an example” of the most troublesome pupils, he is compelled to seek out the radical cause of the mischief, and to apply the true and permanent remedy. Thus, when teaching is an every-day occupation, the teacher is continually liable to fall into habits of mechanical and plodding routine—to lose sight of first principles—to slacken in enthusiasm, and manifest a moral slovenliness which tells immediately upon the school. Its effects are exhibited in the conduct of the children; if he represses this by physical chastisement, he evades the effort of self-correction, and is likely to gradually degenerate. If he has no such means to fall back upon, he is compelled continuously to maintain his efficiency, and to advance instead of retrograding.



The position of the schoolmaster is one of peculiar difficulty in respect of the danger to which he is continually exposed of degenerating into a petty tyrant. Every candid teacher of young children will admit that he has felt this tendency creeping upon him, and unless he be ever on his guard, he must become corrupted by it. The words *dominie* and *pedagogue* suggest at once to the mind the image of a despot and pedant ; a man, perhaps, of natural good qualities spoiled by the habitual exercise of irresponsible authority. It is melancholy to contemplate the number of schoolmasters who, as they grow old in the service, sink into this deplorable condition. It is easy to understand how an excellent man may thus degenerate, when we consider that he is surrounded only by children whom he is bound to govern, and of his superiority over whom he must be conscious. He is tempted to set up his own will as law ; to enforce obedience to his commands simply because he is master, rather than because his commands are just and beneficial. Unless he keeps the strictest watch upon himself he will be apt to praise or blame, to punish or reward, according as it suits his humour. Few men can look back upon their school days and not remember how they watched the features of their master when he entered school, and calculated their own chances of smarting during the day, by the expression of his morning countenance. How many boys' backs have been made to sympathise with their teacher's stomach when he has been suffering under a fit of indigestion ! The teacher of this school has been specially anxious to guard against this tendency ; and, from careful consideration of his experience in this respect, is convinced that none but men of most rare, and almost impossible constitution, can remain free from some degree of such corruption, if they permit themselves to enforce the submission of their pupils by any form of physical chastisement.

When no such punishments are permitted in a school, the teacher is compelled to govern with justice and moderation, and to regulate the energies of his own will ; in short, habitually to govern himself as well as his pupils. When he ceases to do so, he is immediately admonished by a spirit of insubordination ; and as he cannot now *suppress* it by means of his muscular superiority, he must *remedy* it by his moral influence,—by removing the cause which has produced it. If he is unable to do so and the insubordination ripens into rebellion, proof is afforded of his incapacity, and he should either undergo further training himself under an abler man, or seek some other occupation for which he is better fitted.

When corporal punishments were first excluded from the school, the teacher thought that some means of correction were necessary to keep the more disorderly children in subjection, and occasionally one or two of the most refractory were imprisoned or fixed to a post. All such punishments are now set aside ; and the practical conclusion drawn from comparing the results of these experiments is, that *the infliction of punish-*

*ment of any kind whatever as punishment*, or, in other words, direct and exclusive appeals to the nerves of sensation and the sentiment of fear, are not only unnecessary, but decidedly mischievous. All that is required, is simply to place the offender under training, that is, to exercise the faculties manifested in deficiency, or to repress those which are manifested in excess. Such training is necessarily painful, but this pain is instituted by the Creator, as an element of the human constitution, and is a sufficiently intense, and far more effective, appeal to selfishness and fear, than any of the artificial devices for inspiring terror, which are commonly resorted to.

Special care is now taken to make the children understand when they are under discipline, that they are being *exercised*, not *punished*, by the teacher; that if the exercise is painful, the pain is a warning instituted by their Creator, to prevent them from infringing his laws, which, if they obey, will afford them continual happiness.

It may well be conceived that, during the transition from the one system to the other, the school may present an appearance of order inferior to that which is found in seminaries in which the lash is vigorously applied; but every year is reducing the difference, and the moral gain is incalculable. The most earnest efforts are made to enable the children to understand the principles upon which their education is conducted; and to lead them to co-operate intelligently with their teachers in all their efforts. Thus, when children disturb the discipline of the class by a fidgetty want of self-restraint, shewn in talking during the lesson and moving from their place, they are told to stand out of their class, because they disturb those who are diligent, and they are exercised in simply standing still with their faces to the wall, and hands behind their backs; and the duration of this exercise (which is sufficiently irksome to make them very anxious to escape from it), depends on the degree of self-control they exhibit in obeying this extra discipline.

The time thus lost from their lessons is, as far as practicable, made up by extra duty during the play hour. Wilful idleness is treated by giving the offender additional work during the play time, always upon the understanding that it is not merely for the sake of punishing him, but as extra training in habits of industry. Children who come dirty to school are publicly washed. When two children cannot sit beside each other without playing together they are separated; but when they quarrel they are made to sit or stand side by side, sometimes hand in hand together, until all angry feeling has given way to cheerful friendliness.

In the case of troublesome and wilful children it is found useful to explain, plainly and truthfully, the sources of their conduct in presence of their fellows. If a boy is impertinent and tries to display his supposed superiority by braving the authority of the teacher, or if a girl is pouting and sulky, the teacher points out to the class that these are



illustrations of misdirected self-esteem and love of approbation, and asks the children what are the proper uses of these faculties? When they answer that it is to give dignity and amiability to the possessor, he asks them whether the conduct of the offender is dignified and amiable, or the reverse?

In the case of quarrelling they are questioned upon what is the difference between the brain of a dog or any of the lower animals and that of a man? They answer, that man possesses a greater development of the anterior and superior regions, where the organs of the intellectual and moral powers are situated, and upon that depends his superiority to the brute. They are then asked what a dog does when his will is frustrated, or he is in any way annoyed by another dog? Fight, and the strongest and most active conquers. What must man do in a similar case?

Thus the great object of the system pursued in the school is to train the children to restrain and direct their own faculties by self-conscious efforts, under the dictates of their moral and intellectual faculties.

The Teachers and Promoters anticipate more beneficial results from this method of governing and training, than can be obtained from habits of obedience produced by corporal chastisement. When the child is removed from the dread of the latter, he eagerly indulges in all those acts of insubordination and transgression which were forbidden; he enjoys a jubilee of mischievous and misdirected gratification of his propensities. Under the system of moral restraint, the child is early accustomed to weigh his actions and their consequences, to feel that he lives under Divine Laws, and that natural punishments await his transgressions, which he cannot escape, although no human avenger be present.

It is hoped that by these habits of self-control, founded upon perception of consequences, the pupil will in time become a considerate moral agent, capable of regulating his conduct according to the rules of morality in all the ordinary circumstances of life.

In general, it is found useful to remind the children that the present is the period when their brains are growing most rapidly, and that the organs which are the most exercised will grow the largest and the strongest; and, therefore, if they wish to become men and women of a higher order, they must exercise the organs of the higher faculties; and that if they allow the lower animal propensities to act with uncontrolled vigour, they will become mere brutes, instead of true men and women. The fact that they are growing up to be men and women, occupies a larger portion of the thoughts of children than persons unaccustomed to watch them closely imagine. Their ambition in that direction is one of their most powerful motives. As an instance of this, the teacher recollects that when he was a boy he was told by an old black woman that the rain would make him grow, as it made the peas grow; and that if he wished to become a tall man, he should stand out in

the rain as much as possible : he communicated this exciting intelligence to his schoolfellows, and from that time they eagerly exposed themselves, bare headed, to every available shower, the inconvenience of a drenching being as nothing in the scale against the hope of becoming tall men. So it is with boys who have seen a clown perform feats of posturing, putting his legs over his shoulders, &c., and who are told that this power is acquired by practice when young. They at once commence with ridiculous energy, torturing themselves to become "double-jointed," as they term it; the double-jointed men being, in their estimation, a superior order of beings to those who are only "single-jointed."

It is of much importance that this strong ambition of children should be enlightened by knowledge of the laws which really govern their own development into healthy and vigorous men and women; for, when properly directed, it may become a powerful means of advancement. The great object of the lessons in Physiology is, to give them rational views of their own nature, and to render the conditions of health a part of their ordinary course of thought. When this is accomplished, the training is not confined to school hours, but is continued habitually, and will operate through life. The phrenological teaching which the children receive, enables them to understand what faculties they are exercising in any act, and what are the circumstances which call others into activity, and they are thus furnished with the data for self-improvement. Their conduct already shows that they are beginning to apply this knowledge effectively. Their powers of moral and intellectual analysis occasionally surprise visitors who are not acquainted with the simplicity communicated to the study of mind by treating it in connection with cerebral organs, and explaining the uses and abuses of each faculty in familiar terms. Mr Combe taught the Phrenological Class on two days in the week during the winter of 1849-50, and Mr Williams continued the subject after he left Edinburgh in the summer.

The children were equally interested in the subject of Social Economy, which continues to be taught from the admirable manuals of Mr Ellis. It is incredible to those who have not had experience of the fact, how simple, and how obviously true and practical, the leading truths of this science may be rendered to the minds of children, from ten to fourteen years of age. Nearly every one of its propositions admits of illustrations from real life; and *reality* always commands the attention and gratifies the curiosity of the young.

One topic more requires a few passing remarks in this Report.

Some opponents, who may mean well, but who certainly are not scrupulous, have actively circulated the statement that infidelity is taught in the school; and it has been nicknamed "the infidel school." Some excellent persons, who would otherwise have sent their children, have thus been prejudiced against it, and have been induced to with-



hold them. That the manner in which this epithet of "infidel" is dishonestly used as a weapon of offence may be properly understood, some explanation is necessary. Those who use it thus (and the teachers regret that they are compelled to state that among the number are several ministers of religion), have two distinct definitions for the term, and they employ the one or the other at different times, according as it suits their purpose. For the sake of clearness we shall call the first of these the *controversial definition*, and the second the *congregational definition*. An infidel, controversially defined, means, any person who differs from the party using the epithet on any point of theological doctrine which he considers essential to orthodoxy; and, in this sense, infidelity simply means heterodoxy. Thus Mr Combe's "Constitution of Man" is defined to be an infidel book, because some portions of it are at variance with certain points in the Shorter Catechism; and on the same grounds Mr Combe, who wrote it, is of course designated as an infidel. In this manner, the epithet is affixed to the person or object proposed to be calumniated; and in presence of those who are acquainted with the real merits of the charge, and are prepared to controvert it, the calumniator falls back on *this* definition.

The *congregational* definition is totally different. According to it, an infidel is one who denies the existence of a God, and all moral obligations; and infidelity means atheism, sensuality, and gross and deliberate immorality. In this sense, the term "infidel" is used in the pulpit by the class of clergymen and others now referred to; and thus, by this jesuitical device, they attempt to vilify the character of any one who refuses to bow down to them, or of any institution which they are not permitted to control.

The teachers do not charge the clergy as a body with this dishonesty, but are aware that it is only a small, noisy, and narrow-minded minority who thus prostitute Christianity to the gratification of their own prejudices; and they take this opportunity of expressing their thanks to those clergymen who have visited the school, and given it the moral support of their influence. They also willingly give utterance to their respect for every individual, clerical or lay, who conscientiously differs from them, and who defends his own convictions in an honourable and high-minded manner.

The form in which this charge of infidelity has been made against the school, has been somewhat changed of late. It was too much even for the class of men referred to, to continue the direct charge of atheistical teaching, in the face of the First Annual Report and the examinations which have been made public; and it is therefore insinuated that infidel—*i.e.*, congregationally infidel—books are given to the children, with a view to undermine their principles of piety and morality. This charge is made with the greater aspect of plausibility, from the fact that the books used in the school are not taken home

by the children. In most schools, the children buy their own books; but here the books are the property of the school, and are supplied to them gratis; the reason for this being, that the parents of these children cannot afford to pay for the number of books required, some of which are rather high-priced. As no lessons are given to be learned by rote, the books are not taken home by the pupils, and it has been said that they are withheld because they are infidel. Within the last few days, the mother of one of the girls, a very intelligent woman, made anxious inquiries of the teacher on this point. She had been told by three different persons—all of them members of the congregation of a minister in Newington—that infidel books were used in the school, the works of infidel travellers, and the like; she added, that if this charge were not cleared up, she should feel it to be her duty to take her daughter from the school, and to abstain from sending the rest of her children, as she intended. She was otherwise very reluctant to do so, and therefore made the inquiry lest there should be any mistake. That she understood immoral books to have been meant by her informants, became clear when she mentioned that her chief reason for sending her children to the school was, that she had heard Mr Combe's name mentioned in connection with it, and having read the "Constitution of Man" a long time ago, she thought it such a good book that she was very desirous that her children should be trained in accordance with its principles. This was the reason why she hesitated in believing the charges made against the school, and was induced to inquire of the teacher concerning them.

From the nature of the charge, as it is presented to the minds of those who have been taught to interpret the term "infidel" congregationally, very few indeed would have the moral courage to make such inquiries directly of the teacher, for it is to them equivalent to asking him whether he is a scoundrel or not.

In order to satisfy the parents of children at the school, and others who may have been led into any doubts on this subject, as well as to deprive the originators of the calumny of the plea of any other ignorance than wilful ignorance, the Promoters have appended a list of the class-books used in the school, and also of those in the circulating library for the home perusal of the children.

Since the publication of the First Annual Report, Miss Carmichael has been married and left the school. She commanded the universal esteem of the children, the parents, and the promoters.

The Sewing Class is now conducted by Miss Louisa Watkins, who, aided by the pupil teachers, William Mason and James Lambert, also conducts the reading, spelling, writing, and geography classes of the junior divisions, as well as the object-lessons on subjects connected with natural history. The lessons in reading to the higher classes, and on the sciences, are given by Mr Williams, who is also aided by the pupil teachers, some of whom have made sufficient progress in



these subjects, to give very able introductory lessons to the youngest children.

In all the classes except the sewing, the boys and girls are taught together.

In philosophical subjects, the progress of the girls is not equal to that of the boys. Their inferiority is shewn in the power of grasping and applying general principles, and in appreciating causation. In learning matters of detail, isolated facts, and events, they are generally superior to the boys. Thus, when the children are examined upon what they have just read, the girls usually answer more readily than the boys, so long as the answers are confined to the literal contents of the book, and answers in the words of the book are accepted ; but when they are required to supply original illustrations, or apply what they have been reading to new circumstances suggested by the teacher, the boys exhibit a decided superiority. By keeping these differences in view, and alternating the questions between the boys and the girls, they are made continually to assist each other.

By comparing the conduct of boys and girls thus in school together, the moral superiority of the female character is strikingly evident. Their gentleness and docility, their kindness to each other, and conscientious faithfulness in the performance of every duty, added to the depth and earnestness of their religious emotions, render the moral government of the girls a task that is scarcely felt, and their presence is a powerful aid in the moral government of the boys. The petty jealousies, slanderings, and other abuses chiefly originating in misdirected Love of Approbation, to which girls are most liable when restricted to the society of each other, are seldom manifested in the presence of boys ; for their boisterous ridicule is as effective in suppressing these follies as the gentle sensitiveness of the girls is in appealing to the higher feelings of the boys and inducing them to practice moral self-restraint. When any symptoms of these jealousies manifest themselves, the teacher finds it quite sufficient to say that he has observed something of the kind, without mentioning the name, or in any way indicating the offender ; explaining at the same time, phrenologically, the origin of the folly, and that it is especially a girl's failing. The curiosity of the boys is at once excited, and the girls, in their eagerness to avoid an exposure of their weakness, speedily adjust their differences and become better friends than ever. Affectation is treated in the same manner, the principal difficulty here being not in finding a moral remedy strong enough, but in moderating the force of its operation.

In conclusion, the teachers beg to observe, that while the progress of the scholars in learning and in moral improvement has in the great majority of instances been highly satisfactory, not only to themselves, but they hope to their parents, yet it is not to be concealed that in individual instances they have experienced trouble and disappointment. Nature has bestowed different natural endowments

on different individuals ; some are naturally dull in intellectual capacity, and others deficient in the moral emotions, and no system of training that can be pursued in a common school, and no efforts of teachers during the short period of the day and of the lifetime of the children spent in the school, will suffice to realize in all instances the expectations of parental affection. While, therefore, the teachers are deeply conscious of their own imperfections and shortcomings, they claim that indulgent consideration of the difficulties of the task allotted to them, which justice demands, and that where disappointment has been felt by the parents, the whole blame should not be ascribed to them. This explanation is the more necessary, because the system of discipline and teaching followed at this school being so different from those of ordinary seminaries for the children of the working-classes in Scotland, several months are frequently necessary, after a child enters the school, before the mental action and habits can be brought into harmony with its rules, and spontaneous effort be evoked in place of forced exertion. During this period of transition, the scholar may appear not only to be making no progress, but even to be retrograding ; but a few months will shew an improvement which will more than compensate for the time apparently lost.

W. M. WILLIAMS, } *Teachers.*  
 LOUISA WATKINS, }

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The Promoters beg leave to recommend the foregoing lucid Report of the Teachers of the Williams Secular School, to the consideration of the subscribers and of the friends of unsectarian secular education in general. They are happy to bear a fresh testimony to the merits of Mr Williams. He brings a large stock of scientific knowledge combined with high moral qualities, to bear on the instruction and improvement of the children attending his school, and he has triumphed over the difficulties which at first opposed its success. To Miss Watkins also they tender their thanks, as a zealous and improving instructress. It is gratifying to observe that the school is gradually attracting more attention from individuals belonging to the upper classes of society. One proof of this is supplied by the facts, that during the last year Mr Williams' services have been frequently in request to give private instruction to children of a superior station, and that Mr Combe has received applications from a number of heads of families in England asking whether he could recommend tutors for their children capable of teaching in the method pursued in this school, and offering handsome remuneration. Unfortunately he has hitherto been unable to name qualified persons ; but in a few years,



it is hoped that the school may furnish pupils capable of occupying such situations.

The Promoters are happy to say that the religious prejudices mentioned in the Report have interfered to so slight an extent with the prosperity of the school, that they need not have been alluded to at all, had it not been due to the teachers to expose the calumnious character of the charges brought against them. The prejudices, such as they are, exist far more strongly in the middle than in the higher and lower ranks of society. The working men of our large towns, as a class, are less trammelled by traditional and conventional forms of thought and manners than their immediate superiors, and they are also more independent in their position. A skilful operative finds himself safe in sending his children to the Williams Secular School, or any other he prefers ; for his employer knows his value too well to be disposed to part with his services because the seminary selected does not come up to his own ideas of orthodoxy. The shopkeeper, or incipient practitioner in the learned professions, on the other hand, is more at the mercy of the opinion of the individuals on whom his employment depends, and he requires more courage to act on his own convictions. From this class, accordingly, little countenance has been received ; but even among them there are some remarkable exceptions ; for several have sent their children to this school, attracted by the superior instruction which it communicates, and the principles on which it is conducted.

The Promoters beg to return their grateful thanks to the donors and subscribers, whose bounty has enabled them to meet the expenses of the school. To their English friends in particular, their warmest acknowledgments are due. They believe that this case of a school for the benefit of Scotch children, conducted by English teachers, and supported to so great an extent by English subscribers, is unique in the history of the metropolis of Scotland ; and they will rejoice when Scotland shall return the compliment to the capital of England. Meantime they tender their gratitude to those Scotch friends who have kindly interested themselves in the institution, and supported it by their contributions.

The Promoters hope that they do not deceive themselves when they express their own sincere conviction, that the experiment now in progress in this school, can scarcely fail to issue in important results. If the teachers succeed in enabling the children of the working classes to understand the elements of natural science, and the influence of the objects of those sciences on human well-being ; to comprehend their own bodily structure, and the laws of health founded on it, as also to know their own mental faculties, and the natural consequences of their uses and abuses ; and by the combined influence of this knowledge, and moral training, without the aid of corporal chastisement, to acquire the power of intelligent action and self-restraint, they will practically

demonstrate that the capabilities of the youthful mind, as well as the power of teaching as a means of civilization, have hitherto been imperfectly appreciated, and that a far higher condition of moral, intellectual, and physical well-being, lies within the capabilities of the people than has been believed in, even by many of those who have wished to promote their improvement.

GEO. COMBE,  
JAMES SIMPSON, } *Promoters.*

EDINBURGH, 17th May 1851.

## APPENDIX, No. I.

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### EXAMINATION OF THE WILLIAMS SECULAR SCHOOL.

AN examination of the pupils took place on Friday, May 17th, 1850, to which the public were invited by advertisement. Mr George Combe and Mr James Simpson, the promoters of the school, assisted in the proceedings. The number of pupils was 160.

The younger children were examined in the morning at the school No. 1 Surgeon Square. The first division, consisting of children from four to about seven or eight years of age, were first called in, when Mr Combe gave an account of the history of the school, and explained the objects for which it was founded, and the principles upon which it is conducted. Mr Williams, the teacher, then shewed the manner in which the youngest children are taught the rudiments of reading and spelling by means of movable letters. This method is used in several schools, and, by presenting the letters as large objects, it greatly aids the memory in recollecting them, and the judgment in combining them. They then read a portion of a story from a book. After this, Miss Carmichael, the female assistant teacher, to whose charge this division belongs, gave them an object lesson on a nettle, in which the children were questioned upon the physical qualities, the structure and uses of the plant. The attention was fixed and steadily maintained by the object being continually kept before them, and by familiar and amusing illustrations. They were also made to take an active part in the lesson themselves, and their eagerness was shewn by a number of them shouting out their answers. The nettle was selected merely as a familiar object by which to teach the structure and modes of growth of plants in general.

Miss Carmichael then examined them upon geography, the map of Europe being selected: and though so young they shewed themselves well acquainted with the boundaries and positions of every country in this division of the world, with their chief rivers and capital cities, as well as some of their physical features, climates, and productions. In arithmetic they exhibited considerable proficiency in numeration, addition, and the multiplication table.

The examination of the second division, comprising children from seven or eight to about ten years of age, commenced with an object lesson by Mr Williams on a marble. Having been questioned respecting the form of the marble, the form of the earth, &c., the marble was allowed to fall to the ground, and the children were called upon to explain this phenomenon. They were questioned upon gravitation, its influence upon the heavenly bodies and themselves, the adaptation of their own muscular powers and the specific gravity of their bodies to the force of the earth's attraction. They were led to compare the condition in which a man with his limbs as now constituted would find himself, if placed upon a sphere having no greater mass than the moon, or one of the asteroids, where he



would bound upward at every step and be blown away by a moderate breeze, with his state if placed on the planet Jupiter, where the gravitation would be so strong that he would be unable to drag the weight of his own body. These views were adduced as illustrations of the wisdom and benevolence of the Deity in adapting the constitution of man's physical nature to the external world. The sound made by dropping the marble, the fact that the sound was heard by the children, though their ears were not at the spot where the sound was produced, was suggested as a difficulty; but they solved it at once, and by their answers to this and other questions, exhibited a general knowledge of the outlines of Acoustics and of some other branches of physical science.

They were then examined upon Reading, Mental Arithmetic, and Geography, by Miss Carmichael, who, by her method of conducting these and the former lessons, proved herself to be a teacher of no ordinary ability.

The next subject was Physiology. Mr Williams explained that in this division the pupils were taught the general facts of the physical and moral sciences and Physiology, chiefly in the form of object lessons to prepare them for the advanced classes, where these subjects are more fully treated. The children answered very intelligently questions upon the general structure and uses of the skeleton, the muscles and muscular action, on the spinal cord and nerves, and the relations of these to the brain, the digestive organs, and organs of respiration; also on the structure and uses of the skin. They were next told to puzzle each other with questions on any subject they pleased; when a number of intelligent questions on Geography, Arithmetic, and miscellaneous subjects were put by children seven or eight years of age, and in most cases answered correctly by those called on to reply.

The senior division was examined in the evening in the hall under the Music Hall. The children were arranged on the platform; and the body of the room, which accommodates about 400 people, was filled with a highly respectable audience. The examination commenced with Geography. The phenomena of the seasons, and their dependence on the direction of the earth's axis, were well explained by the children, one of them holding in his hand a small globe and walking round another boy, whose head was supposed to represent the sun, shewing how the axis might be directed so as to give us no change of seasons, and how by its actual direction the seasons result. By their answers to some practical problems, they shewed also a clear intelligence of the simple methods of finding the latitude and longitude at sea, and of determining the meridian of any given place, or the hour of the day, and the position of the cardinal points, by the sun.

The teacher then brought forward a piece of chemical apparatus, explaining to the audience that he was about to present to the children some simple experiments which they had never before seen, in order to test the soundness of their knowledge by calling upon them to apply it in explanation of new phenomena, stating that as the time would permit only a very few points of the subjects they had studied to be touched upon, this would be more satisfactory to the audience than any set of questions that could be put to them. The experiment consisted in applying a burning spirit lamp to a glass flask having a long stem attached to it, the end of which was immersed in water. A portion of the air was expelled by the heat from the flask, and on withdrawing the lamp the water ran up the stem into the flask. The children readily explained that the bubbles which appeared in the water at the mouth of the tube, were the result of expansion of the air in the flask, and they referred the rising of the fluid to the pressure of the atmosphere on its exposed surface. This led to further questions on the laws of Heat, Pneumatics, Chemistry, &c., the questions diverging from one subject to another, according to the suggestions afforded by the children's own answers.

The thoughtful aspect of the children, their occasional hesitation, and consulting among themselves, shewed plainly that they were reasoning intelligently upon the subjects brought before them, and not merely repeating from memory.

The teacher stated that they had gone through an elementary course on the general properties of matter, the principles of mechanics, hydrostatics, pneumatics, heat, and light, and were just commencing chemistry and electricity, and that they were very fond of such subjects, and took them up with great facility; and also that they are encouraged to investigate everything that comes in their way, and to enter in a book kept for the purpose questions upon any difficulty they meet with, which questions form the subjects of lessons that prove very interesting and instructive. The book, nearly filled with these questions, was produced, several of them were read, and the children examined upon them.

This was followed by physiology, including the same subjects as in the morning examination, but more in detail; after which Mr Combe examined them on phrenology and its applications. The children named, with great readiness and exactness, the bones, sutures, and leading processes of the skull, the divisions of the brain, and its relations to the spinal marrow. They stated the divisions of the mental organs, and as Mr Combe pointed to a particular spot on an unmarked skull, they named the organ there situated, and stated its uses and abuses. They shewed their comprehension of the modifying effects of different combinations of organs. "What is the consequence if 'cautiousness' be very large and 'combativeness' be very small in an individual?" "He is too much afraid, and cannot contend with opposition." "If both organs be large, what happens?" "The man is prudent and brave." Other similar illustrations were given, and it was clear that the children used phrenology as an instrument of mental analysis.

Mr Combe quoted from a published return of the mortality of Edinburgh the statements that the mean age

	Years.
Of the gentry at death was, . . . . .	43 $\frac{1}{2}$
Of the master tradesmen and clerks, . . . . .	36 $\frac{1}{2}$
Of the artisans, labourers, and servants, . . . . .	27 $\frac{1}{2}$

and asked the children whether God favoured the rich and was unkind to the poor? "No." "How, then, do the labouring classes live so few years?" "Because many of them are dirty, wear dirty clothes, live in ill-aired houses, drink whisky, and are hard wrought." "How can this be remedied? how can we keep them clean, give them well-aired houses, &c.?" "Educate them and teach them to take care of themselves." One boy said, "Employ the scavengers." Roars of laughter followed this answer, and Mr Combe said, "How many scavengers will be needed to wash the skin of every dirty man, of every dirty woman, and of every dirty child, in Edinburgh? (Roars of laughter.) Who will pay them? Will you? (Loud laughter.) Will the dirty people allow the scavengers to wash them?" "No, they will fight then." "Can anybody keep them clean but themselves?" "Nobody can do so." "How does dirt make them die?" "By stopping the pores of the skin and producing disease." "How does sleeping in bad air make them die?" "By weakening their lungs." "How does drinking whisky cut short their days?" "By damaging the stomach and brain." "Can any one, then, make these people live as long as the others?" "Nobody but themselves."

The children sung several songs, and the needlework of the girls was exhibited and approved of, and this concluded the examination. Mr Combe mentioned that the lateness of the hour, and the importance of the subject, prevented them introducing social economy at present, but that the whole evening of Thursday, the 23d May, should be devoted to an examination on it in No. 1 Surgeon Square, which all were invited to attend.



He added, that all this knowledge now exhibited had been imparted since September last, and no burdensome efforts had been made, either by the children or teachers. The whole secret lay in bringing the faculties of the young in a clear and simple manner into communication with the natural objects to which God had adapted them. He appealed to the audience to assist in removing the prejudices which existed against secular education. He did not appeal to them to send more pupils to this school, for already it was full; he only begged of them to induce other persons to examine this mode of teaching, and adopt whatever portions of it were useful. Mr Simpson also addressed the audience, and after a well merited encomium on the teachers, which was responded to by hearty applause, the meeting separated about eleven o'clock P.M.

### EXAMINATION OF CHILDREN ON SOCIAL ECONOMY.

THE postponed examination of the pupils on Social Economy took place on Thursday evening, 23d May 1850, at the School-room, in presence of the promoters, George Combe, Esq., and James Simpson, Esq., and a numerous assemblage of visitors; and again on the following night, in the same place.

Mr Combe commenced the examination by mentioning that by Social Economy was meant an exposition of the laws of Nature, by which wealth was created and distributed. These laws had their foundation in the nature of man, in the constitution of the external world, and in the relations of the one of these to the other. While individuals differed in their views in regard to these foundations of the science, they could not agree on the superstructure. In this school, therefore, the children had been taught the structure and functions of the human body, the structure and functions of the brain, as the index of the mental faculties, the nature of the physical world, and, finally, the adaptations of the first two to the latter. He then questioned the children upon the physical, organic, and moral laws, instituted by the Creator, of all of which the children supplied several illustrations. They were next questioned as to the manner in which man may discover these laws, and the necessity under which he is placed of accommodating his conduct to them. They described the condition in which man enters the world compared with that of the lower animals. In their answers they stated that he comes into life a helpless being, unclothed and unskilled, while the lower animals are clothed; and many, like the swallow, the bee, and the beaver, receive directly from the Creator, without need of apprenticeship, all the skill and all the knowledge of materials necessary for building habitations, and also for collecting food suited to their wants;—that as a compensation for the absence of these gifts, God has presented to man soil, capable when laboured of yielding food, rocks, metals, and trees, and other materials capable of being made into houses; animals bearing fleeces and silk, with flax, cotton, and other elements fit for garments; and that, to avail himself of these, he must acquire, first, knowledge of the capabilities of these objects, next, skill, and, finally, he must apply his bodily and mental powers to the duty of turning them to his own advantage; and that his success will bear a proportion to the degree in which he complies with all these requisites. “Are all equally endowed with the powers requisite for gaining skill and working efficiently?” “No.” “How do you prove this?” The children here referred to the skeleton and to several casts of human heads, and said that some men have larger and stronger bones, lungs, digestive organs,



and brains than others. Supposing all equally ignorant or equally instructed, "which of these would be able to extract from the earth the greatest amount of produce and build the best habitations?" "Those with the highest organisation." The case of two men was supposed, one with strong intellect and well informed, but with a weak body, the other with a weak mind and ignorant, but with a strong body, both engaged in the cultivation of the land, and the children were questioned as to their comparative powers of production, their position at the end of ten years, and the manner in which they could best co-operate. Their answers affirmed that the man with superior knowledge and mental power would invent machines and train animals to help him, while the other could merely make use of his own bodily strength; that at the end of the ten years, the first would have saved the most wealth; that both would gain if the latter were to place himself under the guidance of the former, and receive wages for his labour, by which arrangement he could produce more than when left to himself. In this manner, and with the aid of additional examples, the distinction between the capitalist and the labourer was shown to be a result of the natural inequalities in the capacities of men for producing and accumulating wealth. Mr Simpson then addressed the children on the importance of cultivating their faculties; gaining knowledge as the only means of enabling themselves to improve their social position, and increasing their usefulness to their fellow-creatures. He also questioned the children on the necessity of recognising the rights of property, and the importance of co-operation among workmen. They were then questioned on the subject of competition. This was illustrated by supposing that one of the children had, by cultivating his faculties, gaining knowledge of some useful trade, long practice of it, with industry and economy, gained sufficient to buy land, which, not being a practical farmer himself, he would let to a tenant for rent. It was supposed that the tenant on the farm was a good kind old man, attentive to his moral and religious duties, and beloved by his neighbours; that he had not advanced with the improvement of the age in farming, but continued to smoke his pipe, take his ease in his arm-chair, and jog on in the old way. By this means he could raise six bolls of wheat per acre; but in the neighbourhood there were active intelligent young farmers, who, in consequence of their fathers having saved and supplied them with capital, and of availing themselves of the modern improvements of scientific agriculture, could raise eight bolls per acre, and some of these were seeking farms when the old man's lease expired. Which could afford to offer the highest rent? The young farmers. Why? Because they could extract more wealth from the land. A number of questions were put to the children as to the propriety of accepting the offer of the young farmer, and turning out the old man from the farm he had so long occupied. To these the children answered that it was right to do so, since not only the landlord and the energetic young farmer, but the whole community, would benefit by the increased productiveness of the land, for, supposing the farm to contain 400 acres, and 200 acres to be under corn crops, then 400 bolls more of corn would be produced annually, and the people of the neighbouring towns and villages would have so much more food provided for them.

The young farmer was then supposed to have a limited amount of capital with which to pay wages to labourers. He has enough to be able to pay 20 labourers 2s. per day, but 40 offer themselves, and by bidding against each other, at last offer to work for 1s. per day. The children very ably traced the consequences which would follow if the farmer were to employ the 20 at 2s. or the whole 40 at 1s. In the first case they answered that the unemployed 20 would go away and offer themselves in competition against other labourers, and thus lower wages somewhere else, or become paupers, or starve; but if the 40 were employed the farmer would, by thus getting additional labour at the same cost, produce

more from his land, obtain a larger return at the next harvest, and thus have more capital wherewith to pay wages next year, and, provided the number of workmen had not increased in the meantime, there would be a larger share for each.

The case of the farmer wanting 20 labourers, and only 10 offering, while other farmers were anxious to get those 10, was next considered, and it was shown that the labourers might then get the whole of his available capital, or 4s. per day each, which the farmer would rather give than let his land lie uncultivated; and thus the direct effect of the competition among the farmers would be to raise the wages of the labourers.

The manner in which competition regulates the prices in a public market, by the relation between supply and demand, where both buyers and sellers are equally well informed; and the peculiar case of the fishwoman was next discussed; and the reason stated why her customers generally offered her only one-half of the price she asked, viz., that the customer always assumed that there had been a large take of fish, and that there would be more for sale than were needed, and he offered a low price. The fishwoman knew the extent of the supply, and if it was large she took the low price, if it was small she stood out for her own high price and got it. If the customer had known as well as she did the extent of the supply, the price would have been fixed at once.

Some questions were then asked by the teacher on the subjects of value, money, and bills of exchange, but in consequence of the lateness of the hour the proceedings terminated. Mr Williams stated to the audience that the children had made considerable progress in these and the other more abstruse and technical branches of social economy, and regretted that the time did not permit the examination to be continued.

An adjourned examination on these subjects took place on Friday evening, 24th May 1850, at which Mr Simpson presided, in the absence of Mr Combe, who was in London. In this examination the children were questioned by the teacher on the general laws which determine the relations between wages and profits, and the distribution of wealth, on currency, rent, and population. Our space will not permit us to give their answers in detail, the general tendency of which was to shew that the only means of raising the social condition of the working-classes was by increasing their intelligence and improving their habits. From the thoughtful manner in which the questions were answered, it was evident that they understood the subjects rationally, and had not been getting the subject by rote. The teacher put them to the test in this respect by reading from a newspaper they had not seen before, an account of some project for improving the condition of the needlewomen of London, which they criticised with great intelligence, applying the principles they had just been examined upon to the case brought before them.

This examination altogether shewed very satisfactorily that it is perfectly possible to teach even the very young children (those in the class varied from about nine to thirteen years of age), the most difficult principles of political economy, in such a manner as to enable them to understand their own position in society, and reason intelligently upon the most important social problems that may be presented to them, either as matters of speculation, or for practical solution in their own future career.

The following is a more detailed account of the second examination referred to above :—

Mr Simpson commenced the proceedings by a recapitulation of the last examination, and explaining that the object of the teaching in Social Economy, is to make the children acquainted with the facts and principles existing in nature, and their developments in our existing social arrangements, and not the doctrines or theories of any political sect.

The teacher then asked the children whether a man who had finished



one meal, could raise from the earth the food required for the next, as rapidly as his appetite was renewed?—No, but he might hunt wild beasts and eat them.

Would he be in a savage or a civilised state if he depended on hunting?—He would be a savage.

If he tills the ground to obtain his food, how long must he wait before his food will be ready for him?—About a year.

How much time is requisite for the production of a leg of mutton, or a beefsteak?—Several years; all the time the sheep or ox is growing.

How long is it since the commencement of the manufacture of your jackets and trousers?—Several years.

Who was the first man that worked upon them?—The shepherd who tended the sheep while the wool was growing.

Were you naked all that time?—No.

What did you wear?—Other clothes.

What were they the produce of?—Former labour.

What then are we all at present subsisting upon?—Upon the produce of former labour.

Is a man who receives wages for work he has not yet finished, living upon the produce of former labour?—Yes.

How is that; if his work is not finished, is he not living on his wages, which are the produce of his own labour?—No, he is not.

What is he living upon, if not upon his wages?—Upon what he buys with his wages.

Is what he buys with his wages the produce of his own present labour, or the produce of former labour?—The produce of former labour.

Then of what use is his own present labour to him?—To exchange for this produce of former labour.

Of what use to him is the money he gets as wages?—It is the means by which he makes the exchange.

In the last examination, you shewed that the earth and man are so created that he must labour in order to exist. Is anything else besides labour necessary to civilised man?—He must save some of the produce of his labour.

What do you call the produce of labour?—Wealth.

Then he must save wealth?—Yes.

Is the saving of wealth as necessary to the existence of civilised man as the labouring to produce it?—Yes.

Do all men save wealth?—No.

You have told me that all are living upon the produce of former labour; how is it with those who have saved no such produce; what are they living upon?—A part of the store of those who have saved.

Could those who have not saved live without this aid from those who have?—No.

Do those who have saved give away this part of their wealth without remuneration?—No.

Is this right?—Yes.

Why?—Because if they got no return their store would soon be consumed and all would perish.

But what return are the others able to give when they have saved nothing?—Their labour.

What do you call that portion of the store which is thus received in exchange for the labour?—Wages.

What do you call that store which the owner sets aside to give to others in exchange for their labour?—Capital.

Out of what then are all wages paid?—Out of capital.

What do you call the man who saves and supplies the capital?—The Capitalist.



What do you call the man who receives the capital in the form of wages?  
—The labourer.

Upon what then does the average rate of wages depend?—Upon the quantity of capital in proportion to the number of labourers.

If the capital increases faster than the number of labourers, what takes place in regard to the general rate of wages?—The wages rise.

If the labourers increase faster than the capital, what takes place then?  
—Wages fall.

Does the capitalist receive from the labourer an exact equivalent for the wages he gives him, or something more?—Something more.

What do you call this something more?—Profit.

Is it to the advantage of the labourer, as well as the capitalist, that the capitalist should receive a profit?—Yes.

What induces some men to save more than they intend to consume themselves?—The hope of profit.

If there were no hope of profit, would men be likely to make great stores beyond what they need for themselves?—No.

What, then, would become of those who had stored up nothing?—They would starve.

Is the labourer, then, who has no store, dependent on the capitalist?—Yes.

Is this the result of a natural or an artificial law?—Of a natural law.

What natural law?—That we must subsist on the produce of former labour.

What, then, is the natural remedy for the dependent condition of the labourer?—That he should save for himself.

Is this easy for a man who is receiving very low wages?—No.

Do the majority of labourers at present get high or low wages?—Low wages.

Then, might not the capitalist be compelled by law, or urged through his own moral feelings, to give high wages?—No.

If he were to give higher wages out of the same amount of capital, what would be the result?—His capital would diminish.

Could he go on giving increased wages with diminishing capital?—No, it would be impossible.

How does the capitalist keep up or increase his capital?—By means of his profits.

How, then, can the labourers' wages be raised?—By increasing capital and the productiveness of labour.

How may this be effected, and the labourer rendered self-dependent?—By educating him.

What do you mean by educating him?—Giving him knowledge.

What else?—Training all his faculties.

How would this increase the productiveness of labour?—By making the labourer more skilful.

How would this increase capital?—By making each one prudent and economical, and thus save capital of his own.

If all were more prudent and economical, none marrying without the means of providing for their children, and each saving some capital of his own, what would result?—The capital would increase faster than the labourers.

What then?—Wages would rise.

Would the labourer who had thus saved capital, be able to get anything besides wages?—Yes, profit.

What is necessary to enable a man to invest capital profitably?—Intelligence.

Without considerable intelligence, what would he be likely to do with his capital in a community where capital abounds, and many are seeking investments?—To waste it unprofitably.

You are aware that many workmen are anxious to improve their condition by co-operating and sharing the full produce of their labour, without having any portion deducted as the capitalists' profit. What is the first thing necessary for carrying out such a project?—That they procure capital.

What else?—Intelligence and morality.

Is a much higher degree of intelligence and morality necessary to enable a large number to act in harmony for mutual advantage, than to act separately for individual interests?—Yes.

Some say that, by such co-operation, the labourer, with a little capital of his own, would reap the greatest possible amount of benefit; others that he would obtain a better remuneration by continuing to work for wages, and lending his small stock of capital at a fixed interest, and with good security, to some one who is a capitalist by profession, and who would, as a remuneration for his skill and the risk, get all the profit, over and above the interest, paid. Can you decide which of these is right?—No.

When people disagree on a practical question such as this, and cannot settle it by discussion, what is the most philosophical mode of arriving at the truth?—By careful experiment, on a moderate scale at first.

An extract was then read from a newspaper, containing a statement of the condition of the needlewomen of London, and the programme of a society for relieving them. The following project was first submitted to the children:—

“The principal object of the Society is the obtaining 1s. 6d. per day each, for ten hours' work, for the needlewomen, and if possible, 2s. This is to be effected by arrangements with the shopkeepers—subscribers to the association dealing only with such as pay the full rate of wages, and requiring of them, in their turn, to place papers in their windows stating that they do so.” The children were then questioned upon the effects of this, and answered that some temporary relief might be afforded to a portion of the sufferers, but that the general tendency of thus raising the wages, would be to bring more into the same trade, and that unless the ladies were prepared to take all the needlework this additional number would produce, their condition would be as bad or worse than before. That the real cause of the evil is the great number of unskilled labourers only able to do the lowest kinds of work, of which the supply is thus made so great in proportion to the demand that its value becomes much reduced. That unless this cause be removed, the evil must continue to exist, and the most benevolent exertions can only produce a partial and temporary benefit. In answer to further questions, they stated that this cause is removable; that the diffusion of sound knowledge, and the development of paternal forethought, among the working-classes, is the natural and permanent remedy for such evils; that if the parents of these needlewomen had been thus trained, they would not have married until they had acquired the means of supporting their children and giving them a fair start in life, and such a multitude of helpless beings would not have been brought into the world. That the best means of temporary relief to the present sufferers, would be to give them such instruction as would render their labour more productive, and to assist them in the mean time, while learning, by direct charity. In confirmation of what the children had stated respecting the possibility of obtaining, even immediately, much better wages by acquiring greater skill, the teacher referred to the high wages paid to women and young girls who are skilful enough to paint flowers, &c., on porcelain, papier-maché, and other ornamental articles, the demand for which is rapidly increasing, the want of artistical skill among artisans being one of the great drawbacks to the further extension of the manufacturing prosperity of this country. He also mentioned the case of a lady he knew, who, in consequence of the failure of her husband in business, was suddenly



thrown upon her own resources, and who, by active application of a well-trained intellect and knowledge of the world, soon found that she could earn nearly £2 per week by dressing dolls for the bazaars in this same London, while the uneducated needlewomen around her were working for 6d. per day, and even less. Some questions were then put to the children respecting the condition of the artisan whose trade had been superseded by machinery or any other improvement. They answered that if uneducated and without capital, he would be driven to compete with the machinery, and work at starvation wages, while the educated man with a little capital would, by being able to estimate the probable effect of the machinery before it came into full operation, have warning and opportunity for making preparations for change of occupation, and his capital to subsist on, if necessary, and to assist him in learning another branch of trade, which only an intelligent man can successfully do. The case of Chaplin and Horne, the railway carriers, who, instead of being ruined by the railways superseding their old road waggons, had, by adapting themselves to the change, been benefited, was cited as an example. Also the water-gilders, the most intelligent of whom have learned the art of electro-gilding, and thus changed a most unwholesome and disagreeable occupation for a harmless and elegant one, while the less intelligent are still breathing the poisonous fumes of mercury and working for lower wages, and many still persist in believing that the old mercurial process is the best.

They were then questioned on the subject of value and exchange, and answered that the value of one commodity is measured by the quantity of other commodities that can be obtained in exchange for it; that the value of corn measured in cloth is the quantity of cloth which will exchange for a given quantity of corn, and so on; that this value depends upon the relations between supply and demand; that in order to facilitate exchange, which the division of labour renders necessary, a general standard has been established by which all values may be measured; that this general measure of value is money; and that the price of an article is its value measured in money. That the values and prices of commodities which depend on supply and demand, are made known to us by the competition between buyers and sellers, and that without this competition we have no means of ascertaining, with any degree of accuracy, the value of anything. They were then questioned upon the manner in which trade between two distant places may be conducted, without an actual transfer of money. Two girls were supposed to be in America, and two boys on another form represented merchants in Edinburgh, the space between the forms standing for the Atlantic. They then went through a series of suppositious transactions, with an imaginary bill of exchange for £1000, which was made to save the expense and risk of transmitting a thousand sovereigns across the Atlantic separating the forms. They next explained the manner in which bank-notes, cheques, and the balancing of book debts, may be made to perform the functions of money, as far as it acts as a medium of exchange.

They were next examined upon the subject of rent, and answered, that in the first settlement of a country the best land would be occupied; that when this was all appropriated and cultivated, and the growing population demanded more, land of an inferior quality must be brought into cultivation; that it was then a matter of indifference to the agriculturist whether he received the inferior for nothing, or paid a rent equal to the difference of productiveness, for the privilege of cultivating the superior; that thus as population advanced, less and less productive soils become cultivated; and that the natural rent of land devoted to agricultural purposes, is the difference between its productiveness and that of the least productive soil that will remunerate the cultivator for the capital and labour expended upon it.



They were next questioned upon the manner in which this is brought about, and upon what the price of food depends?—Upon the cost of obtaining that which is obtained under the least advantageous circumstances.

Let us suppose that the population of a country is such, that all the wheat they require can be supplied, say at 40s. per quarter; that all the land which is fertile enough to remunerate the cultivator at this price is fully cultivated, and that in order to obtain more food, an inferior land must be brought under cultivation, requiring more capital and labour for its tillage, so that it will only remunerate at 45s. per quarter. If the population now increases, what must take place before the additional food required can be raised from this inferior land?—All the wheat in the country must rise to 45s.

What effect would this have on the rent of the first quality of land?—To raise it.

What regulates the price of food in a country which is partly supplied from foreign markets?—The cost at the dearest market from which the food is obtained.

Do you include the cost of importation in this?—Yes.

Let us suppose the case of a country which consumes all its own produce in wheat, and just as much as it can obtain from a foreign market at 40s.; that the population increases so as to exhaust this market, and make it necessary to purchase the additional quantity required at a dearer market, where it costs, say 45s. What will take place before this additional quantity is obtained?—The whole of the wheat grown in the country, and all that purchased from the first foreign market, will rise to 45s.

What effect will this have on the rents of the land, both in the importing and the first-mentioned exporting country?—To raise them all.

Then how does an increasing population tend to influence the existing population as regards their food?—To make them pay dearer for it.

What is its tendency as regards rents?—To raise them.

Then who are the chief gainers by an increase of population?—Landlords.

Who are the chief losers?—The purchasers of food.

If, however, the productiveness of the land, in consequence of agricultural improvements, increases in the same ratio as the population, will the price of food then rise?—No.

Mr Simpson then made some concluding remarks on the general progress of the children in the various subjects which they have been taught, and the proceedings terminated.

## APPENDIX, No. II.

## CATALOGUE OF SCHOOL CIRCULATING LIBRARY.\*

- |   |   |
|---|---|
| Robinson Crusoe, 2 copies.                              | Short Tales, by Mrs Burden.                       |
| Chambers's Miscellany, 20 vols.                         | Duty is Safety, by Mrs Sherwood.                  |
| Mutiny of the Bounty.                                   | Think before you Act, ditto.                      |
| Life and Travels of Mungo Park.                         | The Traveller, ditto.                             |
| Paterson's Zoology for Schools.                         | Easy Stories.                                     |
| Parley's Tales about Greece.                            | Rasselas.   |
| Percy's Tales of the Kings of Eng-<br>land.             | Truth and Trust.                                  |
| The Playfellow.   | Little Robinson. W. & R. Chambers.                |
| The Chinese, 4 vols. Knight & Co.                       | Jacopo. ditto.                                    |
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| ————— Elephant.   | Clever Boys. ditto.                               |
| William Caxton.   | Alfred in India. ditto.                           |
| The Englishwoman in Egypt, 4 vols.                      | Moral Courage. ditto.                             |
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| Curiosities of Physical Geography,<br>2 vols.           | Health made Easy.                                 |
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| Shipwrecks, 4 vols.                                     | Principles of Physiology, by A.<br>Combe.         |
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| Miss Edgeworth's Tales.                                 | Farmer Higginson.                                 |
| Uncle Philip's Conversations on Ani-<br>mals.           | Noble on the Brain.                               |
| History of the Horse.                                   | Hine's Tales.                                     |
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| Uncle Manners, by Mrs Sherwood.                         | Chambers's Papers for the People,<br>2 vols.      |
|   | History of the Horse.                             |

\* The books are lent to the children to read at home, on payment of a subscription of *One Penny* per month, the proceeds of which are applied to the purchase of new books.

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 Parley's Universal History.  
 \_\_\_\_\_ Tales about Plants.

### CLASS-BOOKS USED IN THE SCHOOL.

No. of Copies.		
12	Baker's	Graduated Reading, No. 1.
12	Do.	do. 2.
12	Do.	do. 3.
1	Reid's	Dictionary.
12	M'Leod's	Mental Arithmetic.
1	The	Singing Master.
3	Keys to the	Dublin Grammar.
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3	Theory and Practice,	Arithmetic.
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25	Do.	do. Phrenology.
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2	Mayo's	Lessons on Objects.
6	Tait's	Algebra.
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34	Revelations of	Parlour Printing Press.
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## APPENDIX, No. III.

### ABSTRACT OF ACCOUNTS OF THE WILLIAMS SECULAR SCHOOL.

(For the year 1850.)

#### DONATIONS AND SUBSCRIPTIONS.

Balance from 1849, . . . . .	£21	1	11
The Trustees of W. R. Henderson, Esq., . . . . .	50	0	0
William Ellis, Esq., Champion Hill, Camberwell, . . . . .	25	0	0
Edward Lombe, Esq., county of Norfolk, . . . . .	25	0	0
Thomas Horlock Bastard, Esq., Charlton, Dorsetshire, . . . . .	5	5	0
George Baillie, Esq., Warwick, . . . . .	5	0	0
Paul Butler, Esq., 13 Sussex Square, Hyde Park, . . . . .	5	0	0
Charles Butler, Esq., do. . . . .	5	0	0
George Combe, Esq., 45 Melville Street, . . . . .	5	0	0
Arthur Trevelyan, Esq., Wallington, . . . . .	5	0	0
James Hay, Esq., Leith, . . . . .	5	0	0
Hewett Cotterell Watson, Esq., Thames Ditton, . . . . .	5	0	0
Mrs Carmichael, 24 Rutland Square, Dublin, . . . . .	2	0	0
Miss Carnegie, Duncliffe, . . . . .	2	0	0
Mrs Leith Lumsden, Meggetland House, . . . . .	1	0	0
Do. For Prizes, . . . . .	0	5	0
William Ivory, Esq., W.S., . . . . .	1	1	0
James Simpson, Esq., Advocate, . . . . .	1	1	0
Misses M. and B. Combe, Edinburgh, . . . . .	1	0	0
Miss Douglas, Ainslie Place, . . . . .	1	0	0
Miss Stirling Graham, of Duntrune, . . . . .	1	0	0
Miss Murray, Moray Place, for Prizes, . . . . .	1	0	0
Do. do. do. . . . .	1	0	0
The Hon. Lord Murray, 11 Great Stuart St., Edinr., . . . . .	1	0	0
Professor Gregory, 114 Princes Street, Edinburgh, . . . . .	1	0	0
Stirling Lacon, Esq., York Place, Edinburgh, . . . . .	1	0	0
Charles Maclaren, Esq., 15 Northumberland St., Edinr., . . . . .	1	0	0
John S. Oliver, Esq., High Street, Edinburgh, . . . . .	1	0	0
Carry forward, . . . . .	£178	13	11

Brought forward,	£178	13	11
School-fees received during the above period from the children, at 4s. per quarter, . . .	135	10	4
Sundries, . . . . .	1	4	6
Total receipts, . . . . .	<hr/>	£315	8 9

### EXPENDITURE.

Salaries and proportions of Fees to Male and Female Teachers and Monitors for the year 1850, . . .	£160	5	10½
Rent and Taxes for School-house in No. 1, Surgeon Square, and Halls for public meetings, . . .	23	19	9½
Fires, Gas, and Cleaning School, . . .	13	18	8½
School Fittings, Furniture, and Repairs, . . .	34	6	8½
School Books and Stationery, . . . . .	36	4	0½
Apparatus, &c., . . . . .	10	14	5½
Printing Prospectuses, Circulars, Advertising, Post- ages, &c., . . . . .	22	11	3
Prizes to Children, . . . . .	3	10	0
Sundries, . . . . .	0	12	7
	<hr/>	£306	3 5
Balance in favour of School, . . . . .		£9	5 4

*Edinburgh, 12th May 1851.*—I have examined the detailed accounts, of which the foregoing is an abstract, and compared them with the vouchers, and hereby certify that they are correctly stated, and sufficiently vouched.

WM. FRASER, 1 ALVA STREET.



# THIRD ANNUAL REPORT

OF THE

## WILLIAMS SECULAR SCHOOL.

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Man is approaching a more complete fulfilment of that great and sacred mission which he has to perform in this world. His reason being created after the image of God, he has to use it to discover the laws by which the Almighty governs his Creation; and, by making these laws his standard of action, to conquer Nature to his use—himself a Divine instrument. Science discovers these laws of power, motion, and transformation; industry applies them to the raw matter which the earth yields us in abundance, but which becomes valuable only by knowledge; art teaches us the immutable laws of beauty and symmetry, and gives to our productions forms in accordance with them.

*Speech of Prince Albert at the Mansion House, March 21, 1850.*

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LONDON: SIMPKIN, MARSHALL, AND COMPANY.

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